

Evaluating Risk of Homelessness among Veterans: Psychometric Modeling of the Homelessness Risk Assessment (HRA) Instrument

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Presenter Disclosures

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Background

Effective targeting of resources for Veterans at risk of or experiencing homelessness is a major challenge faced by the Department of Veterans Affairs (VA)

There is a need to develop a more effective instrument to evaluate risk of homelessness among Veterans

The Homelessness Risk Assessment (HRA) was developed from our earlier work on screening and assessment of risk for homelessness (Montgomery et al., 2014)

- Screens for risk and literal homelessness, and assesses economic, health, safety net, and homeless history factors
- Used by providers of homelessness prevention and rapid rehousing services administered through VA's Supportive Services for Veteran Families (SSVF) program
- Contributed to the development of the SSVF Homelessness Prevention Screening form

This study examines the psychometric properties of the HRA in a sample of Veterans, and whether a risk score from the HRA could predict risk for homelessness

Method

HRA

- 36 items arranged in a 2-stage format:
 - 1) current living situation, housing expenses and benefits, and factors contributing to housing instability
 - 2) risk of losing housing, recent life events, social support, homeless history, health conditions, and barriers to retaining housing
- Stage 1 questions are asked of all respondents
- Stage 2 is only administered to Veterans who meet criteria for imminent risk of literal homelessness

Data were collected from four SSVF providers in the Philadelphia, PA area between Oct. 12, 2012 and Sept. 26, 2016

- Veterans who perceived themselves to be homeless or at risk presented themselves for homelessness prevention or rapid rehousing assistance were asked to complete the HRA

Sample

2,853 unique Veterans completed the HRA

- If a Veteran had completed the HRA multiple times, the first was selected

Demographics

- 87.7% male
- 12.4% White, 57.0% Black, 1.3% other, 29.3% missing
- 3.4% Hispanic/Latino, 67.2% non- Hispanic/Latino, 29.3% missing
- Age: M=51.5 yo, SD=11.98 Min=22, Max=91

Sample

Categorized into 3 groups based on 2 screening questions:

- Do you have a home of your own that is safe and where you have lived for the last 90 days?
 - Homeless N: 1,839
- Are you worried that you may not have a home of your own that is safe and where you can live for the next 90 days?
 - At-risk N: 906
- “Negative” N: 108

However, 685 Veterans were determined to be at imminent risk of literal homelessness according to the criteria within the HRA

- Imminent loss of current primary nighttime residence
- No other residence
- No resources or support networks immediately available to prevent homelessness
- Acknowledges current experiencing one of six precarious housing situations

Psychometric Modeling

For each of the two stages of the HRA:

- Cronbach alpha was computed to estimate the internal consistency reliability of items
 - Based on tetrachoric correlations due to categorical data
- Exploratory factor analysis was conducted to examine the inter-relationship among items
 - Oblimin rotation, weighted least squares using tetrachoric correlation matrix due to categorical data
- Confirmatory factor analysis (CFA) was conducted to determine the construct validity of items
 - Delta parameterization, WLSMV estimator due to categorical data

Analysis conducted on entire sample for stage 1 items

- By screening subgroup membership: All, Homeless, At-risk, Negative

Analysis conducted on imminent risk of literal homelessness sample only for stage 1 and stage 2 items

Internal Consistency Reliability (Cronbach alpha)

Stage 1 items: Entire sample

- All (N= 2,853): .64
- Homeless (N=1,839): .69
- At-risk (N=906): .68
- Negative (N=108): .66

Stage 1 items

- Imminent Risk Only (N=685): .64

Stage 2 items

- Imminent Risk Only (N=685): .88

Stage 1 + Stage 2 items

- Imminent Risk Only (N=685): .88

Factor Analyses

EFA

- Results most consistent for the imminent risk of homelessness subsample
- Results showed that items “hung together” essentially as arranged in the HRA instrument (e.g., disabilities/health, financial resources/needs, homeless history)

CFA

- Used EFA results as a rough guide
- Overall model fit ranged from .60 to .90 across all models
- Models had better fit with larger number of items and factors, and when only including the imminent risk of homelessness subsample
- Final models including all items had fit indices in the .80 range with 6 factors
 - Homelessness history, financial resources/needs, disabilities/health, safety net, family structure, and other homelessness risk factors

HRA: Risk Score

14 items from the HRA closely map on to the targeting items of the SSVF Homelessness Prevention Screening form

Each item has an associated weight that can be combined into a total score (item, weight):

- Has moved because of economic factors two or more times in the past 60 days (3)
- Living in a hotel or motel not paid for by charitable organizations or by Federal, State, or local government programs (3)
- Living with friends or family, on a temporary basis (3)
- Being discharged from an institution and reintegrating into the community without a stable housing plan (3)
- History of homelessness as an adult, prior to any homeless episode occurring in the past 60 days (3)
- Households annual gross income is less than 30% of local Area Median Income for household size (3)
- Housing loss within 14 days (3)
- At least one dependent child under age 6 (3)
- At least one dependent child age 6-17 (2)
- Veteran returning from Iraq or Afghanistan (2)
- Applied for shelter or spent at least one night during the prior 60 days literally homeless (shelter, place not meant for human habitation, transitional housing for homeless persons) (2)
- Sudden and significant loss of income, including employment and/or cash benefits (2)
- Housing loss within 21 days (2)
- Rental and/or utility arrears (1)

HRA: Risk Score

HRA Risk Score was computed: $M=7.64$, $SD=3.70$, $Min=1$, $Max=21$

HRA Risk Score was used to predict whether the Veteran was at imminent risk of homelessness using logistic regression

- Odds ratio = 1.13, $p<.001$
- For every 1 point increase of the HRA Risk Score, odds of imminent risk of homelessness increased by 13%

Conclusion

For Veterans at imminent risk of homelessness, the HRA possessed good internal consistency reliability (reaching .88)

EFA and CFA both provided evidence that items related to specific domains (eg, safety nets, risk factors, housing situation) hung together in clusters that matched the structure/organization of the HRA

- No HRA items stood out as candidates for elimination or revision

HRA Risk Score was effective in predicting imminent risk for homelessness

The HRA offers utility in collecting information on individuals experiencing imminent risk of homelessness and can provide information on degree of risk